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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,637	02/15/2001	Heinz-Jurgen Bachelier	ESN-38	5572

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EXAMINER

COOLEY, CHARLES E

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 02/04/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No.  
**09/784,637**Applicant(s)  
**Bachelier et al.**Examiner  
**Charles Cooley**Art Unit  
**1723**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 Dec 2002
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, and 5-15 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, and 5-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 Feb 2001 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## OFFICE ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119, which papers have been placed of record in the file.

### *Drawings*

2. The drawings are objected to under 37 CFR § 1.83(a) since the drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the features canceled from the claims. No new matter should be entered.

- a. the pump buckets are not adequately shown in the drawings. No new matter is permitted. Note the discussions below on this issue.

3. Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects must include a print or pen-and-ink sketch showing changes in *red ink* in accordance with MPEP § 608.02(v).

IMPORTANT NOTE: The filing of new formal drawings to correct the noted defect may be deferred until the application is allowed by the examiner, but the print or pen-and-ink sketch with proposed corrections shown in red ink is required in response to this Office Action, and *may not be deferred*.

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***Specification***

4. The substitute specification has been entered.
5. The abstract is acceptable.

***Claim Rejections - 35 U.S.C. § 112, first paragraph***

6. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Upon reconsideration of the amended application, the specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to provide an adequate written description of the invention.

Upon reconsideration and in view of Applicant unexpectedly making it a primary issue in the last response, the specification is deemed inadequate in describing the invention because it is unclear what structure constitutes the recited "pump buckets". The pump buckets are not adequately described in the written specification other than referring to them as "pump buckets" nor are they depicted in the drawing figures. Consequently, the shape, configuration, and arrangement of the pump buckets is unknown. Applicant has failed to describe the pump buckets structure in such full,

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clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.

8. Claims 1-2 and 5-15 are therefore rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

***Claim Rejections - 35 U.S.C. § 112, second paragraph***

9. Claims 1-2 and 5-15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The second paragraph of 35 U.S.C. § 112 requires a claim to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Under *In re Hammack*, 427 F.2d 1378, 166 USPQ 204 (CCPA 1970) and *In re Moore*, 169 USPQ 236 (CCPA 1971), claims must be analyzed to determine their metes and bounds so that it is clear from the claim language what subject matter the claims encompass. This analysis must be performed in light of the applicable prior art and the disclosure. The definiteness of the claims is important to allow others who wish to enter the market place to ascertain the boundaries of protection that are provided by the claims. *Ex parte Kristensen*, 10 USPQ 2d 1701, 1703 (BPAI 1989).

One of the purposes of 35 U.S.C. § 112, second paragraph, "is to provide those who would endeavor, in future enterprise, to approach the area circumscribed by the claims of a patent, with adequate notice demanded by due process of law, so that they

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may more readily and accurately determine the boundaries of protection involved and evaluate the possibility of infringement and dominance." *In re Hammack*, supra. As set forth in *Amgen Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200, 1217, 18 USPQ2d 1016, 1030 (Fed. Cir. 1991):

The statute requires that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." A decision as to whether a claim is invalid under this provision requires a determination whether those skilled in the art would understand what is claimed. See *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 624, 225 USPQ 634, 641 (Fed. Cir. 1985) (claims must "reasonably apprise those skilled in the art" as to their scope and be "as precise as the subject matter permits.").

The pending claims fail to particularly point out and distinctly claim the subject matter which applicant regards as the invention and are therefore of indeterminate scope because the recited structure of the pump buckets is not adequately set forth. An analysis of the claims reveals that the metes and bounds thereof is not clear and it is unknown from the claim language what subject matter the claims encompass or exclude. Lacking any guidance to the contrary, it is difficult or impossible to determine what structure of the prior art can reasonably be deemed "pump buckets" within the scope of the instant disclosure and claims. Since the pump buckets issue is unresolved, the previous rejections are repeated and modified and new prior art is applied that is considered to show "pump buckets" when construing the term in a reasonable domain.

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***Claim Rejections - 35 U.S.C. § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or  
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

11. Claims 1, 2, 5, 10, 11, and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by GB 2047104.

GB 2047104 discloses a rotor 29; housing 40; drive device in the form of motors 25, 26; rotatable element 30 being an impeller or rotor with pump buckets 33; coaxial drive shafts 27, 28 coupled to the motors and the rotor 29 and rotatable element 30.

12. Claims 1, 2, 5-6, 8, 10, 11, 13, and 14 are rejected under 35 U.S.C. § 102(e) as being anticipated by Muntener (USP 6,227,698).

Muntener (USP 6,227,698) discloses in Fig. 3 a rotor 221; housing 1; rotatable element 204 being an impeller or rotor with pump buckets 8; coaxial drive shafts 23,

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105 coupled to the motors and the rotor 221 and rotatable element 204 ; drive device 401 which can drive the rotor and rotatable element at a desired speed and direction and which may constitute two separate motors connected to the shafts 23 and 105 with speed controls (Col. 9, lines 39-50); the shaft 105 being hollow; shaft seal (above 402) in Fig. 3; fixed stator interleavings 7 on the housing 1.

13. Claims 1, 2, and 5-7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Herfeld (USP 4,918,665).

Herfeld (USP 4,918,665) discloses a rotor 12; housing 3; rotatable element 11 being an impeller or rotor with pump buckets 11a; coaxial drive shafts 19, 21 coupled to a motor 14 and the rotor 12 and rotatable element 11; the shaft 19 being hollow; the inner drive shaft 21 supported in the outer drive shaft 19 by roller bearings 22 and the outer shaft 19 being supported in a second housing 4 by bearings 20.

14. Claims 1, 2, 5-7, 9-11, and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Pillon et al. (USP 4,883,363).

Pillon et al. (USP 4,883,363) discloses a rotor 4; housing 27; rotatable element 12 being an impeller or rotor with pump buckets 14; drive device in the form of motors 6, 17; coaxial drive shafts 1, 2 coupled to the motors and the rotor 4 and rotatable element 12 ; the shaft 2 being hollow; the inner drive shaft 1 supported in the outer drive shaft 2 by roller bearings (Fig. 1) and the outer shaft 2 being supported in a second housing 28 by bearings (Fig. 1); the rotor and rotatable element having base plates 4, 12 from which blades 5, 14 extend; the base plates being coupled to the



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shafts 1, 2 which are oriented in a vertical direction; the drive shafts being driven by belts 7, 18.

15. Claims 1, 2, 5, 6, 9-11, and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Butler (USP 1,624,037).

Butler (USP 1,624,037) discloses a rotor 3; housing 1; rotatable element 2 being an impeller or rotor with pump buckets 20, 21 (see particularly Figure 4); a drive device in the form of prime movers and belts 8 (Col. 1, lines 34-43); coaxial drive shafts 10, 14 coupled to the prime movers and the rotor 3 and rotatable element 2 ; the shafts 10, 14 being hollow; the rotor and rotatable element having base plates coupled to the drive shafts.

16. Claims 1, 2, and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Howorka (USP 5,460,444).

Howorka (USP 5,460,444) discloses a rotor 2; housing (col. 5, lines 22-23); rotatable element 1 being an impeller or rotor with pump buckets 6 which are described as being concave and thus able to hold material as a bucket would (col. 3, lines 18-25); coaxial drive shafts as seen in Fig. 1.

\* \* \*

With regard to the above rejections and although the patent to at least Muntener teaches as such, the operational and functional language of the claims (e.g., the language of claim 2, claim 10, lines 3-6, and claim 11) has been considered but fails to impart or invoke any further structure or means (per 35 USC 112, sixth paragraph and

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MPEP 2181) to the pending apparatus claims which defines over the applied prior art. Consequently, since all of the claimed structure is met by the applied prior art, the rejections under 35 USC 102 are deemed proper.

***Claim Rejections - 35 U.S.C. § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claims 1, 2, 5, 10, 11, and 14 are rejected under 35 U.S.C. § 103 as being unpatentable over GB 2047104 in view of Applicant's Admitted Prior Art (AAPA).

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GB 2047104 discloses the recited claim elements as noted above. However, assuming, *arguendo*, that GB 2047104 does not disclose the recited pump buckets, AAPA at page 8, second paragraph of the instant specification teaches that pump buckets on an impeller are known. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have substituted the impeller elements of GB 2047104 with pump buckets as taught by AAPA for the purpose of transporting the substance being processed with a high pumping power through the device.

20. Claims 1, 2, 5-6, 8, 10, 11, 13, and 14 are rejected under 35 U.S.C. § 103 as being unpatentable over Muntener (USP 6,227,698) in view of Applicant's Admitted Prior Art (AAPA).

Muntener (USP 6,227,698) discloses the recited claim elements as noted above and suggests that the impeller elements may take a variety of different shapes (col. 3, lines 37-41). However, assuming, *arguendo*, that Muntener does not disclose the recited pump buckets, AAPA at page 8, second paragraph of the instant specification teaches that pump buckets on an impeller are known. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have substituted the impeller elements of Muntener with pump buckets as taught by AAPA for the purpose of transporting the substance being processed with a high pumping power through the device.

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21. Claims 1, 2, and 5-7 are rejected under 35 U.S.C. § 103 as being unpatentable over Herfeld (USP 4,918,665) in view of Applicant's Admitted Prior Art (AAPA).

Herfeld (USP 4,918,665) discloses the recited claim elements as noted above. However, assuming, *arguendo*, that Herfeld does not disclose the recited pump buckets, AAPA at page 8, second paragraph of the instant specification teaches that pump buckets on an impeller are known. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have substituted the impeller elements of Herfeld with pump buckets as taught by AAPA for the purpose of transporting the substance being processed with a high pumping power through the device.

22. Claims 1, 2, 5-7, 9-11, and 14 are rejected under 35 U.S.C. § 103 as being unpatentable over Pillon et al. (USP 4,883,363) in view of Applicant's Admitted Prior Art (AAPA).

Pillon et al. (USP 4,883,363) discloses the recited claim elements as noted above. However, assuming, *arguendo*, that Pillon et al. does not disclose the recited pump buckets, AAPA at page 8, second paragraph of the instant specification teaches that pump buckets on an impeller are known. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have substituted the impeller elements of Pillon et al. with pump buckets as taught by AAPA for the purpose of transporting the substance being processed with a high pumping power through the device.

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23. Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Pillon et al. or Butler in view of Scheimann et al. (USP 5,253,937).

Pillon et al. discloses axial inlet opening 21 and a container 23 but does not disclose the return line and valve. Butler discloses axial inlet opening 9 and a container 11 but does not disclose the return line and valve. Scheimann et al. (USP 5,253,937) discloses a device having a container housing 12 with an outlet opening 44. Multiple return lines 34 communicate with the outlet opening 44 for returning material back to the container housing 12 under the control of valves 40. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the device of Pillon et al. or Butler with a return line and valve as disclosed by Scheimann et al. (USP 5,253,937) for the purpose of enabling the concentration of substances in the mixture to be adjusted as desired (Col. 5, lines 1-5).

24. Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Muntener (USP 6,227,698) in view of Haegeman (USP 5,980,100).

Muntener (USP 6,227,698) discloses the recited seal but not a sliding ring seal. Haegeman (USP 5,980,100) discloses a shaft 24 and a seal 22 for the shaft. The seal is of the sliding ring type. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have substituted the seal of Muntener with a sliding ring seal as disclosed by Haegeman for the purpose of sealing the shaft against its surrounding elements (Col. 2, lines 45-48).

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***Response to Amendment***

25. Applicant's arguments with respect to the pending claims have been considered but are deemed to be moot in view of the new grounds of rejection.

With regard to the "pump buckets" issue, Applicant is forewarned that the unexceptional and typical argument that is probably forthcoming asserting that one skilled in the art would know what structure constitutes the recited pump buckets will likely be unconvincing. Applicant is reminded that arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Pearson*, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974). The fact that one skilled in the art might realize from reading a disclosure that something is possible is not a sufficient indication to such person that the something is a part of the appellants' disclosure. See *In re Barker*, 559 F.2d 588, 591, 194 USPQ 470, 472 (CCPA 1977), *cert. denied*, 434 U.S. 1064 (1978).

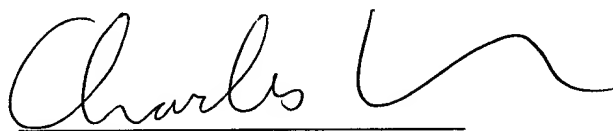
***Conclusion***

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Charles Cooley whose telephone number is ☎ (703) 308-0112.

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27. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is ☎ (703) 308-0651.

Dated: 27 January 2003

A handwritten signature in cursive script, appearing to read "Charles Cooley", written over a horizontal line.

**Charles Cooley**  
**Primary Examiner**  
**Art Unit 1723**